

U.S. Patent Application No. 10/711,469
Response dated September 10, 2007
Reply to Office Action dated March 9, 2007

RECEIVED
CENTRAL FAX CENTER

SEP 10 2007

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-6 (canceled)

Claim 7. (new) A method of determining a gas pore pressure of a drill cutting sample, comprising:

- a. passing a grinded sample having fine particles, the grinded sample being obtained by grinding a drill cutting sample taken from an earth drilling process, through a first sieve having a first size;
- b. calculating a statistic average of a mass weight of the grinded sample which passes through the first sieve;
- c. receiving the grinded sample in a container;
- d. receiving a liquid in the container, the liquid covering the grinded sample to an initial liquid level at an initial pressure;
- e. adding or subtracting liquid to vary a size of a bubble of gas within the sample;
- f. measuring the size of the bubble and a pressure for the bubble; and
- g. calculating the gas pore pressure.

Claim 8. (new) The method of claim 7, further comprising determining an emission from the formula: $\text{Emission} = \text{Volume} / \text{Pressure}$.

Claim 9. (new) The method of claim 7, further comprising repeating steps e-g for a subsequent bubble after the bubble.

Claim 10. (new) The method of claim 7, further comprising repeating steps e-g for a subsequent liquid level after the initial liquid level.

Claim 11. (new) The method of claim 10, wherein the subsequent liquid level is higher than the initial liquid level.

U.S. Patent Application No. 10/711,469
Response dated September 10, 2007
Reply to Office Action dated March 9, 2007

Claim 12. (new) The method of claim 10, wherein the subsequent liquid level is lower than the initial liquid level.

Claim 13. (new) The method of claim 7, the pressure being atmospheric pressure.

Claim 14. (new) The method of claim 7, further comprising passing the grinded sample through a second sieve, the second sieve having a second size which is smaller than the first size.

Claim 15. (new) The method of claim 14, further comprising passing the grinded sample through a third sieve, the third sieve having a third size which is smaller than the second size.

Claim 16. (new) The method of claim 15, wherein the size of the bubble is measured by relative comparison of a diameter of the bubble to the first size of the first sieve.

Claim 17. (new) The method of claim 14, wherein the size of the bubble is measured by relative comparison of a diameter of the bubble to the second size of the second sieve.

Claim 18. (new) The method of claim 15, wherein the size of the bubble is measured by relative comparison of a diameter of the bubble to the third size of the third sieve.

Claim 19. (new) The method of claim 7, wherein the size of the bubble is measured by the measurement of a diameter of the bubble by microscope.

Claim 20. (new) The method of claim 7, the container constitutes a test tube.

Claim 21. (new) The method of claim 7, the liquid being a substantially clear liquid.

Claim 22. (new) The method of claim 8, wherein the volume is calculated based on a spherical bubble.

Claim 23. (new) The method of claim 9, wherein steps e-g are repeated a plurality of cycles to determine an error correction and a standard deviation.

U.S. Patent Application No. 10/711,469
Response dated September 10, 2007
Reply to Office Action dated March 9, 2007

Claim 24. (new) The method of claim 10, wherein steps e-g are repeated a plurality of cycles to determine an error correction and standard deviation.